

# SAFETY DATA SHEET





## DIMETHYL DISULFIDE

### SECTION 1: Identification of the substance/mixture and of the company/undertaking Trade name:

<b>1.1 Product identifier:</b>	
<b>CAS Number:</b>	624-92-0
<b>EC number:</b>	210-871-0
<b>1.2 SYNONYMS:</b>	<ul style="list-style-type: none"><li>• Methyl disulfide</li><li>• Dimethyl sulfide disulfide</li><li>• Dimethyl Disulfide</li><li>• Methanedisulfide</li><li>• Sulfurous acid, dimethyl ester</li><li>• DMDS</li></ul>

### SECTION 2: Hazards identification:

<b>2.1 Classification of the substance or mixture:</b>	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
<b>2.2 Label elements:</b>	Labelling according to Regulation (EC) No 1272/2008 Flammable liquids, (Category 2) Acute toxicity, oral (Category 3) Acute toxicity, inhalation (Category 3) Eye irritation, (Category 2) Skin sensitization, (Category 1) Specific target organ toxicity - single exposure, Upper respiratory tract (Category 1), Specific target organ toxicity - single exposure, Central nervous system (Category 3), Short-term (acute) aquatic hazard, (Category 1) Long-term (chronic) aquatic hazard, (Category 1)

<b>Hazard Pictograms:</b>	   
<b>Signal Word:</b>	Danger
<b>Hazard statements:</b>	<p><b>H225:</b> Highly flammable liquid and vapor.</p> <p><b>H301 + H331:</b> Toxic if swallowed or if inhaled.</p> <p><b>H317:</b> May cause an allergic skin reaction.</p> <p><b>H319:</b> Causes serious eye irritation.</p> <p><b>H336:</b> May cause drowsiness or dizziness.</p> <p><b>H370:</b> Causes damage to organs (Upper respiratory tract) if inhaled.</p> <p><b>H410:</b> Very toxic to aquatic life with long lasting effects.</p>
<b>Precautionary Statements:</b>	<p><b>P210:</b> Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p><b>P273:</b> Avoid release to the environment.</p> <p><b>P280:</b> Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p><b>P301 + P310:</b> IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</p> <p><b>P303 + P361 + P353:</b> IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.</p> <p><b>P304 + P340 + P311:</b> IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.</p> <p><b>P391:</b> Collect spillage.</p> <p><b>P405:</b> Store locked up.</p> <p><b>P501:</b> Dispose of contents/ container to an approved waste disposal plant.</p>

<b>2.3 Other hazards:</b>	
<b>Inhalation:</b>	can cause respiratory irritation, dizziness, nausea, and in severe cases, damage to the respiratory system.
<b>Ingestion:</b>	can lead to nausea, vomiting, abdominal pain, diarrhea, and potential damage to the digestive system.
<b>Skin Contact:</b>	can cause irritation, redness, and potentially allergic reactions or burns with prolonged exposure.
<b>Eye contact:</b>	can cause severe irritation, redness, pain, and potential damage to the cornea.
<b>Chronic Exposure:</b>	can lead to respiratory issues, liver and kidney damage, and prolonged skin or eye irritation.
<b>Aggravation of pre-existing conditions:</b>	may aggravate pre-existing conditions such as asthma, respiratory disorders, skin sensitivities, or liver and kidney disease.

### SECTION 3: Composition/information on ingredients

<b>3.1 Chemical characterisation:</b>	Substances
<b>CAS No:</b>	Description: 624-92-0 DIMETHYL DISULFIDE
<b>Identification number(s):</b>	EC number: 210-871-0

### SECTION 4: First aid measures

<b>4.1 Description of first aid measures</b>	
<b>General information:</b>	
<b>After inhalation:</b>	If breathed in, move person into fresh air. If not breathing, give

	artificial respiration. Consult a physician.
<b>After skin contact:</b>	Remove contaminated clothing immediately .Wash with plenty of water. Consult a physician.
<b>After eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician.
<b>After swallowing:</b>	Rinse mouth with water. Immediately after ingestion. If conscious, make victim drink two glasses at most immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.
<b>4.2 Most important symptoms and effects, both acute and delayed:</b>	Acute exposure can cause respiratory irritation, nausea, dizziness, and eye or skin irritation, while chronic exposure may lead to liver and kidney damage, as well as long-term respiratory issues.
<b>4.3 Indication of any immediate medical attention and special treatment needed:</b>	Treat symptomatically.

## SECTION 5: Firefighting measures

<b>5.1 Extinguishing media:</b>	Carbon dioxide. Water spray. Alcohol-resistant foam.
<b>5.2 Special hazards arising from the substance or mixture:</b>	Carbon oxides, sulphur oxides.
<b>5.3 Advice for firefighters:</b>	Wear fully protective suit, safety glasses and respiratory device. Cool tanks/drums with water spray/remove them into safety.
<b>5.4 further information:</b>	no data available

## SECTION 6: Accidental release measures

<b>6.1 Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Avoid dust accumulation. Seek medical attention.
<b>6.2 Environmental precautions:</b>	Do not enter this chemical into drains.
<b>6.3 Methods and material for containment and cleaning up:</b>	Take up spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

## SECTION 7: Handling and storage

<b>7.1 Precautions for safe handling:</b>	For use in are with adequate ventilation. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material Do not use in confined spaces. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation.
<b>7.2 Conditions for safe storage, including any incompatibilities:</b>	Store in original containers. Keep containers securely sealed Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

	Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. Keep away from moisture.
<b>Requirements to be met by storerooms and receptacles:</b>	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
<b>7.3 Specific end uses:</b>	no data available

## SECTION 8: Exposure controls/personal protection

<b>8.1 Control parameters</b>	
<b>Additional information about design of technical facilities:</b>	A system of local and general exhaust is recommended.
<b>8.2 Exposure controls</b>	
<b>Appropriate engineering controls</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday
<b>Personal protective equipment:</b>	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
<b>General protective and hygienic measures:</b>	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	<b>Respiratory protection:</b> Required.
<b>Protection of hands:</b>	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws. Wash and dry hands.
	<b>Eye protection:</b> Required

<b>Protection of Body:</b>	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.
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## SECTION 9: Physical and chemical properties

<b>9.1 Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance: Form:</b>	Liquid
<b>Colour:</b>	Colourless to pale yellow
<b>Odour:</b>	Strong, sulfur like odor
<b>pH-value:</b>	Not applicable
<b>Melting point/Melting range:</b>	-60°C
<b>Boiling point/Boiling range:</b>	188°C
<b>Flammability (solid, gaseous):</b>	Flammable liquid
<b>Ignition temperature:</b>	240°C
<b>Decomposition temperature:</b>	Not specified
<b>Self-igniting:</b>	None
<b>Flash point:</b>	57°C
<b>Danger of explosion:</b>	None
<b>Explosion limits: Lower:</b>	1.4%
<b>Explosion limits: Upper:</b>	8.4%
<b>Vapour pressure:</b>	0.48 kPa at 20 °C
<b>Density at 20 °C:</b>	1.21 g/cm <sup>3</sup>
<b>Relative density:</b>	1.21
<b>Vapour density:</b>	3.3
<b>Evaporation rate:</b>	No data available
<b>Solubility in / Miscibility with- water at 20 °C:</b>	Slightly Soluble
<b>Partition coefficient:(n- octanol/water)</b>	2.5
<b>Viscosity:</b>	0.91 cP at 20 °C

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	Reactive and can react with strong oxidizing agents, acids, and bases.
<b>10.2 Chemical stability</b>	This chemical is stable under storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	Can cause dangerous reactions with strong oxidizing agents, strong acids and bases.
<b>10.4 Conditions to avoid</b>	Heat, flames, sparks.
<b>10.5 Incompatible materials</b>	Strong reducing agents, strong acids, bases.
<b>10.6 Hazardous decomposition products</b>	Carbon monoxides, sulfur oxides.

## SECTION 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
<b>Acute Toxicity:</b>	<b>LD50</b> (Oral, Rat): 190 mg/kg <b>LD50</b> (Dermal, Rabbit): no data available <b>LC50</b> (Inhalation Rat): 5 mg/l (4 hr)
<b>Skin corrosion/Irritation:</b>	Causes Mild skin irritation
<b>Serious eye damage/irritation:</b>	Causes Eye irritation
<b>Respiratory damage/irritation:</b>	Causes serious respiratory irritation.
<b>Ingestion:</b>	No data available
<b>Germ cell mutagenicity:</b>	No data available
<b>Carcinogenicity:</b>	No data available
<b>Reproductive toxicity:</b>	No data available
<b>Specific target organ toxicity - single exposure:</b>	Can cause damage to respiratory system and central nervous system.
<b>Specific target organ toxicity - repeated exposure:</b>	No data available
<b>Aspiration hazard:</b>	No data available
<b>Signs and Symptoms of Exposure:</b>	Refer section 2.3
<b>11.2 Additional toxicological information</b>	
<b>Biodegradability</b>	Moderately Biodegradable



## SECTION 12: Ecological information

<b>12.1 Toxicity Aquatic toxicity:</b>	LC50(fish): 0.97 mg/l (96 hr) EC50(daphnia): 1.82 mg/l (48 hr) ErC50(algae): 6.7 mg/l (96hr)
<b>12.2 Persistence and degradability:</b>	Moderately Biodegradable
<b>12.3 Bioaccumulative potential:</b>	Not bioaccumulative
<b>12.4 Mobility in soil:</b>	Moderate mobility
<b>12.5 Other adverse effects:</b>	No data available

## SECTION 13: Disposal considerations

<b>13.1 Waste treatment methods</b>	
<b>Uncleaned packaging Recommendation:</b>	dispose of in accordance with local hazardous waste regulations
<b>Recommended cleansing agents:</b>	Water, water and soap, isopropyl alcohol, acetone.

## SECTION 14: Transport information

<b>14.1 UN-Number · ADR, ADN, IMDG, IATA:</b>	2381
<b>14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:</b>	DIMETHYL DISULFIDE
<b>14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :</b>	6.1
<b>14.4 Packing group · ADR, IMDG, IATA:</b>	2
<b>14.5 Environmental hazards:</b>	Yes, harmful to aquatic life
<b>14.6 Special precautions for user:</b>	Handle responsibly.

## SECTION 15: Regulatory information

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU</b>	Directive 2012/18/EU, under that this substance is classified in listed substances as flammable liquids.
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<b>Named dangerous substances:</b>	This substance is listed in the annex 1 to the directive.
<b>15.2 Chemical safety assessment:</b>	Chemical assessment has not been carried out.

## SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and limitations of our knowledge, this document is only for reference. Users should make their independent judgment suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.